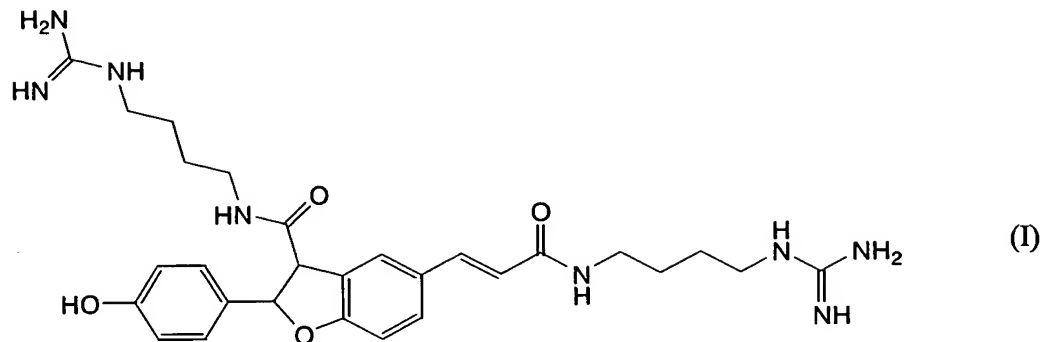
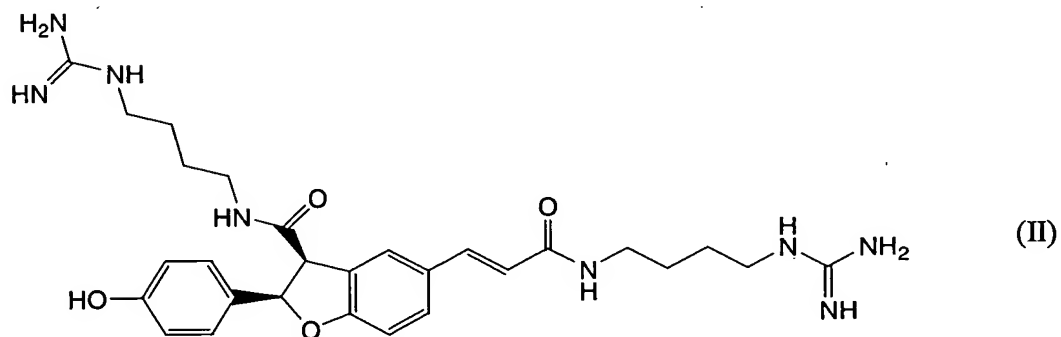


# CLAIMS

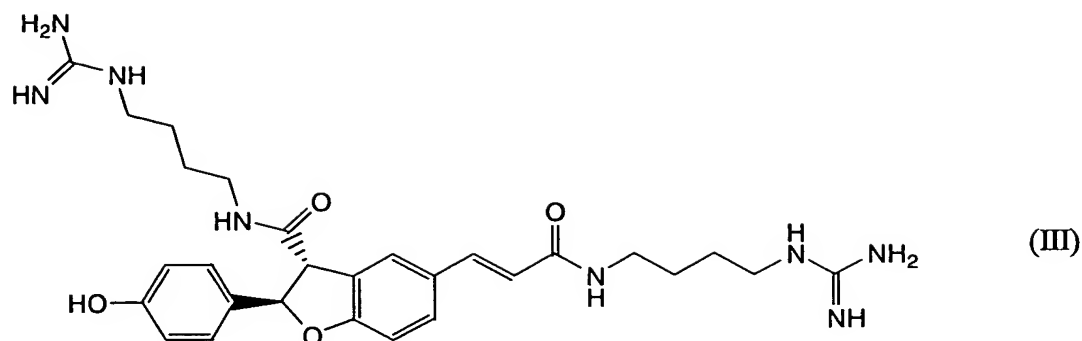
1. A compound represented by the following chemical formula (I):



2. A compound represented by the following chemical formula (II):



3. A compound represented by the following chemical formula (III):
- 10



4. The compound according to claim 1, 2, or 3 isolated from a fermentation product of yeast, barley, germinated barley, or a fractionated product of germinated barley.

5. The compound according to claim 4, wherein the fractionated product of germinated barley is barley malt spouts.

6. The compound according to any one of claims 1 through 5 showing its activity by acting on muscarinic M<sub>3</sub> receptors.

7. The compound according to claim 6, wherein the activity of the compound elicited via muscarinic M<sub>3</sub> receptors is an ability to stimulate gastrointestinal motility, gastric acid secretion, urination or appetite, or to enhance drinkability.

8. A food or beverage product, an additive to a food or beverage product, a pharmaceutical product, or an animal feed, characterized by containing a natural product or a processed natural product containing the compound according to any one of claims 1 through 7.

9. The food or beverage product, the additive to a food or beverage product, the pharmaceutical product, or the animal

feed according to claim 8, wherein the natural product or the processed natural product containing the compound according to any one of claims 1 through 7 is a fermentation product of yeast, barley, germinated barley, or a fractionated product of germinated barley.

10. The food or beverage product, the additive to a food or beverage product, the pharmaceutical product, or the animal feed according to claim 8, wherein the natural product or the processed natural product containing the compound according to any one of claims 1 through 7 is barley malt or a processed product of barley malt sprout.

11. A composition showing its activity via muscarinic  $M_3$  receptors, characterized by containing the compound according to any one of claims 1 to 7, or a natural product or a processed natural product containing the compound.

12. The composition according to claim 11, wherein the activity elicited via muscarinic  $M_3$  receptors is an ability to stimulate gastrointestinal motility, gastric acid secretion, urination or appetite, or to enhance drinkability.

13. The composition according to claim 11 capable of stimulating gastrointestinal motility and/or enhancing drinkability.

14. The composition according to any one of claims 11 to 13, wherein the natural product or the processed natural product containing the compound according to any one of claims 1 to 7

is a fermentation product of yeast, barley, germinated barley, or a fractionated product of germinated barley.

15. The composition according to any one of claims 11 to 13, wherein the natural product or the processed natural product  
5 containing the compound according to any one of claims 1 to 7 is barley malt spout or a processed product of barley malt sprout.

16. A food or beverage product, containing the compound according to any one of claims 1 to 7, a natural product or a  
10 processed natural product, or a composition containing the compound.

17. The food or beverage product according to claim 16, being an alcoholic beverage or a non-alcoholic beverage.

18. The food or beverage product according to claim 16, being  
15 a fermented malt beverage.

19. The food or beverage product according to claim 18, wherein the fermented malt beverage is a beer, a low malt beer, or a low alcohol fermented malt beverage.

20. The food or beverage product according to claim 18, being  
20 a tea-based beverage.

21. The food or beverage product according to claims 16 to 20, wherein the final product of the food or beverage product contains the compound of any one of claims 1 to 7 in an amount of 0.01mg/L to 100mg/L.

25 22. The food or beverage product according to claim 16, being

a health food and/or a specially designed food product.

23. An additive to a food or beverage product, or a pharmaceutical product, containing the compound according to any one of claims 1 to 7, a natural product, a processed  
5 natural product, or a composition containing the compound.

24. The additive to a food or beverage product, or a pharmaceutical product according to claim 23, capable of acting on muscarinic  $M_3$  receptors.

25. The use of the compound capable of acting on muscarinic  
10  $M_3$  receptors according to any one of claims 1 through 7, a natural product, a processed natural product or a composition containing the compound, in the production of a food or beverage product, an additive to a food or beverage product, a pharmaceutical product, or an animal feed  
15 that has an ability to stimulate gastrointestinal motility, gastric acid secretion, urination or appetite, or an ability to enhance drinkability, or in the production of a stimulating agent of gastrointestinal motility or an enhancing agent of drinkability.

20 26. The use according to claim 25, characterized in that the natural product or the processed natural product containing the substance having an ability to stimulate gastrointestinal motility via muscarinic  $M_3$  receptors is a fermentation product of yeast, barley, germinated barley, a fractionated product of  
25 germinated barley, or barley malt sprout.

27. A method for separating/isolating the compound according to any one of claims 1 to 3, comprising the steps of:

preparing a natural product or a processed natural product containing the compound according to any one of claims

5 1 to 7 to serve as a starting material;

removing volatile components through an extraction/solid liquid separation/drying process when the starting material is a solid product and through a drying process when the starting material is a liquid product, thereby collecting non-volatile

10 components;

subjecting the non-volatile components to a chromatography using a hydrophobic adsorbent (*e.g.*, synthetic adsorbent) to remove unadsorbed components and collect adsorbed components as a crude fraction containing the

15 concentrated active substance;

subjecting the crude fraction to a cation exchange chromatography (*e.g.*, weakly acidic cation exchange resin) to remove unadsorbed components;

eluting the active substance with an acidic methanol  
20 (methanol/hydrochloric acid);

subjecting the eluate to a gel filtration chromatography using 0.01N hydrochloric acid to obtain a purified fraction;  
and

subjecting the purified fraction to ODS-HPLC ( $C_{18}$ -high  
25 performance liquid chromatography) for further purification.

28. The method according to claim 27, characterized in that the starting material is a fermentation product of yeast, barley, germinated barley, a fractionated product of germinated barley, or barley malt sprout.

5 29. The compound according to claim 2, showing the CD spectrum of Fig. 13.

30. The compound according to claim 3, showing the CD spectrum of Fig. 14.